

720

780

SEQUENCE LISTING

tol-Myers Squibb Company <120> A NOVEL HUMAN G-PROTEIN COUPLED RECEPTOR, HGPRBMY6, EXPRESSED HIGHLY IN SMALL INTESTINE <130> D0040NP/3053-4119US3 US 09/966,422 <140> <141> 2001-09-26 <150> 60/235,602 <151> 2000-09-27 <150> 60/306,604 <151> 2001-07-19 <150> 60/315,412 <151> 2001-08-28 <160> 81 <170> PatentIn version 3.0 <210> <211> 1683 <212> DNA <213> Homo sapiens <400> atggagactt attccttgtc tttgggtaat caatcagtgg tggaacctaa catagcaata 60 cagtcagcaa atttctcttc agaaaatgcg gtggggcctt caaatgttcg cttctctgtg 120 cagaaaggag ctagcagttc tctagtttct agttcaacat ttatacatac aaatgtggat 180 ggccttaacc cagatgcaca gactgagctt caggtcttgc ttaatatgac gaaaaattac 240 300 360

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Val Ser Ser Ser Thr Phe Ile His Thr Asn Val Asp Gly Leu Asn Pro 50 55 60

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Asp Val Ile Met Ile Glu Ser Ala Asn Tyr Gly Arg Thr Asp Asp Lys 50 55 60

Ile Cys Asp Ser Asp Pro Ala Gln Met Glu Asn Ile Arg Cys Tyr Leu 65 70 75 80

Pro Asp Ala Tyr Lys Ile Met Ser Gln Arg Cys Asn Asn Arg Thr Gln 85 90 90

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Thr Tyr Lys Tyr Leu Glu Val Gln Tyr Glu Cys Val Pro Tyr Lys Val

Glu Gln Lys Val Phe Leu Cys Pro Gly Leu Leu Lys Gly Val Tyr Gln 130 135 140

Ser Glu His Leu Phe Glu Ser Asp His Gln Ser Gly Ala Trp Cys Lys 145 150 155 160

Asp Pro Leu Gln Ala Ser Asp Lys Ile Tyr Tyr Met Pro Trp Thr Pro 165 170 175

Tyr Arg Thr Asp Thr Leu Thr Glu Tyr Ser Ser Lys Asp Asp Phe Ile 180 185 190

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Thr Arg Asn Ile Val Lys Phe Asp Leu Arg Thr Arg Ile Lys Ser Gly 235 235 240

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- Tyr Val Val Lys Ser Val Tyr Glu Asp Asp Asp Asn Glu Ala Thr Gly 325 330 335
- Asn Lys Ile Asp Tyr Ile Tyr Asn Thr Asp Gln Ser Lys Asp Ser Leu 340 345 350
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- Tyr Asn Pro Arg Asp Asn Leu Leu Tyr Val Trp Asn Asn Tyr His Val 370 380
- Val Lys Tyr Ser Leu Asp Phe Gly Pro Leu Asp Ser Arg Ser Gly Pro 385 390 395 400
- Val His His Gly Gln Val Ser Tyr Ile Ser Pro Pro Ile His Leu Asp 405 410 415
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- Ala Met Asp Gln Leu Val Gly Leu Leu Asp Val Gln Leu Arg Asn Leu 595 600 605
- Thr Pro Gly Gly Lys Asp Ser Ala Ala Arg Ser Leu Asn Lys Leu Gln 610 615 620
- Lys Arg Glu Arg Ser Cys Arg Ala Tyr Val Gln Ala Met Val Glu Thr 625 635 635
- Val Asn Asn Leu Leu Gln Pro Gln Ala Leu Asn Ala Trp Arg Asp Leu 645 650 655
- Thr Thr Ser Asp Gln Leu Arg Ala Ala Thr Met Leu Leu Asp Thr Val 660 665 670
- Glu Glu Ser Ala Phe Val Leu Ala Asp Asn Leu Leu Lys Thr Asp Ile 675 680 685
- Val Arg Glu Asn Thr Asp Asn Ile Gln Leu Glu Val Ala Arg Leu Ser 690 695 700
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- Ser Thr Asn His Ser Val Ile Val Asn Ser Pro Val Ile Thr Ala Ala 770 780
- Ile Asn Lys Glu Phe Ser Asn Lys Val Tyr Leu Ala Asp Pro Val Val 785 790 795 800
- Phe Thr Val Lys His Ile Lys Gln Ser Glu Glu Asn Phe Asn Pro Asn 805 810 815
- Cys Ser Phe Trp Ser Tyr Ser Lys Arg Thr Met Thr Gly Tyr Trp Ser 820 825 830
- Thr Gln Gly Cys Arg Leu Leu Thr Thr Asn Lys Thr His Thr Thr Cys 835 840 845
- Ser Cys Asn His Leu Thr Asn Phe Ala Val Leu Met Ala His Val Glu 850 855 860

- Val Lys His Ser Asp Ala Val His Asp Leu Leu Leu Asp Val Ile Thr 865 870 875 880
- Trp Val Gly Ile Leu Leu Ser Leu Val Cys Leu Leu Ile Cys Ile Phe 885 890 895
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- Lys Asn Leu Cys Ile Ser Leu Phe Val Ala Glu Leu Leu Phe Leu Ile 915 920 925
- Gly Ile Asn Arg Thr Asp Gln Pro Ile Ala Cys Ala Val Phe Ala Ala 930 935 940
- Leu Leu His Phe Phe Phe Leu Ala Ala Phe Thr Trp Met Phe Leu Glu 945 950 955 960
- Gly Val Gln Leu Tyr Ile Met Leu Val Glu Val Phe Glu Ser Glu His 965 970 975
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- Ile Val Ala Val Ser Ala Ala Val Asp Tyr Arg Ser Tyr Gly Thr Asp 995 1000 1005
- Lys Val Cys Trp Leu Arg Leu Asp Thr Tyr Phe Ile Trp Ser Phe 1010 1015 1020
- Ile Gly Pro Ala Thr Leu Ile Ile Met Leu Asn Val Ile Phe Leu 1025 1030 1035
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- Pro Glu Ser Gly Cys Leu Asp Asn Ile Lys Ser Trp Val Ile Gly 1055 1060 1065
- Ala Ile Ala Leu Leu Cys Leu Leu Gly Leu Thr Trp Ala Phe Gly 1070 1080
- Leu Met Tyr Ile Asn Glu Ser Thr Val Ile Met Ala Tyr Leu Phe 1085 1090 1095
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- Thr Asp Asp Lys Ile Cys Asp Ser Asp Pro Ala Gln Met Glu Asn Ile 130 135 140
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- Leu Asp Val Thr Thr His Leu Pro Ser Ala Ala Ser Gln Ile Pro Ala 545 550 555 560
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- Pro Gln Gly Pro Asp Leu Ser Asn Cys Ser Ser Pro Trp Val Asn His 610 620
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- Glu Leu Ala Glu Gln Thr Arg Asn His Leu Asn Ala Gly Asp Ile Thr 645 650 655
- Tyr Ser Val Arg Ala Met Asp Gln Leu Val Gly Leu Leu Asp Val Gln 660 665 670
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- Ala His Val Glu Val Lys His Ser Asp Ala Val His Asp Leu Leu 930 935 940
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- Asp Tyr Arg Ser Tyr Gly Thr Asp Lys Val Cys Trp Leu Arg Leu 1070 1080
- Asp Thr Tyr Phe Ile Trp Ser Phe Ile Gly Pro Ala Thr Leu Ile 1085 1090 1095

Ile Met Leu Asn Val Ile Phe Leu Gly Ile Ala Leu Tyr Lys Met Phe His His Thr Ala Ile Leu Lys Pro Glu Ser Gly Cys Leu Asp Asn Ile Lys Ser Trp Val Ile Gly Ala Ile Ala Leu Leu Cys Leu Leu Gly Leu Thr Trp Ala Phe Gly Leu Met Tyr Ile Asn Glu Ser Thr Val Ile Met Ala Tyr Leu Phe Thr Ile Phe Asn Ser Leu Gln Gly Met Phe Ile Phe His Cys Val Leu Gln Lys Lys Val Arg Lys Glu Tyr Gly Lys Cys Leu Arg Thr His Cys Cys Ser Gly Lys Ser Thr Glu Ser Ser Ile Gly Ser Gly Lys Thr Ser Gly Ser Arg Thr Pro Gly Arg Tyr Ser Thr Gly Ser Gln Ser Arg Ile Arg Arg Met Trp Asn Asp Thr Val Arg Lys Gln Ser Glu Ser Ser Phe Ile Thr Gly Asp Ile Asn Ser Ser Ala Ser Leu Asn Arg Glu Gly Leu Leu Asn Asn Ala Arg Asp Thr Ser Val Met Asp Thr Leu Pro Leu Asn Gly Asn His Gly Asn Ser Tyr Ser Ile Ala Gly Gly Glu Tyr Leu Ser Asn Cys Val Gln Ile Ile Asp Arg Gly Tyr Asn His Asn Glu Thr Ala Leu Glu Lys Lys Ile Leu Lys Glu Leu Thr Ser Asn Tyr Ile Pro Ser Tyr Leu Asn Asn His Glu Arg Ser Ser Glu Gln Asn Arg Asn Met Met Asn Lys Leu Val Asp Asn Leu Gly Ser Gly Ser Glu Asp Asp Ala Ile Val Leu Asp Asp Ala Ala Ser Phe Asn His Glu Glu Ser Leu Gly Leu Glu Leu Ile His Glu Glu Ser

- Asp Ala Pro Leu Leu Pro Pro Arg Val Tyr Ser Thr Asp Asn His 1385
- Gln Pro His His Tyr Ser Arg Arg Arg Leu Pro Gln Asp His Ser 1400 1405 1410
- Glu Ser Phe Phe Pro Leu Leu Thr Asp Glu His Thr Glu Asp Pro 1415 1420 1425
- Gln Ser Pro His Arg Asp Ser Leu Tyr Thr Ser Met Pro Ala Leu 1430 1440
- Ala Gly Val Pro Ala Ala Asp. Ser Val Thr Thr Ser Thr Gln Thr 1445 1450 1455
- Glu Ala Ala Ala Lys Gly Gly Asp Ala Glu Asp Val Tyr Tyr 1460 1465 1470
- Lys Ser Met Pro Asn Leu Gly Ser Arg Asn His Val His Pro Leu 1475 1480 1485
- His Ala Tyr Tyr Gln Leu Gly Arg Gly Ser Ser Asp Gly Phe Ile 1490 1495 1500
- Val Pro Pro Asn Lys Asp Gly Ala Ser Pro Glu Gly Thr Ser Lys 1505 1510 1515
- Gly Pro Ala His Leu Val Thr Ser Leu 1520 1525
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- <211> 541
- <212> PRT
- <213> Homo sapiens

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- Pro Pro Asn Leu Leu Glu Asn Leu Ser Pro Glu Asp Ser Val Leu Val 20 25 30
- Arg Arg Ala Gln Phe Thr Phe Phe Asn Lys Thr Gly Leu Phe Gln Asp 35 40 45
- Val Gly Pro Gln Arg Lys Thr Leu Val Ser Tyr Val Met Ala Cys Ser 50 55 60
- Ile Gly Asn Ile Thr Ile Gln Asn Leu Lys Asp Pro Val Gln Ile Lys 65 70 75 80
- Ile Lys His Thr Arg Thr Gln Glu Val His His Pro Ile Cys Ala Phe 85 90 95
- Trp Asp Leu Asn Lys Asn Lys Ser Phe Gly Gly Trp Asn Thr Ser Gly

100 105 110

Cys Val Ala His Arg Asp Ser Asp Ala Ser Glu Thr Val Cys Leu Cys 120 Asn His Phe Thr His Phe Gly Val Leu Met Asp Leu Pro Arg Ser Ala 135 Ser Gln Leu Asp Ala Arg Asn Thr Lys Val Leu Thr Phe Ile Ser Tyr 150 Ile Gly Cys Gly Ile Ser Ala Ile Phe Ser Ala Ala Thr Leu Leu Thr 165 170 Tyr Val Ala Phe Glu Lys Leu Arg Arg Asp Tyr Pro Ser Lys Ile Leu 180 Met Asn Leu Ser Thr Ala Leu Leu Phe Leu Asn Leu Leu Phe Leu Leu 200 Asp Gly Trp Ile Thr Ser Phe Asn Val Asp Gly Leu Cys Ile Ala Val 215 Ala Val Leu Leu His Phe Phe Leu Leu Ala Thr Phe Thr Trp Met Gly 230 Leu Glu Ala Ile His Met Tyr Ile Ala Leu Val Lys Val Phe Asn Thr Tyr Ile Arg Arg Tyr Ile Leu Lys Phe Cys Ile Ile Gly Trp Gly Leu Pro Ala Leu Val Val Ser Val Val Leu Ala Ser Arg Asn Asn Glu Val Tyr Gly Lys Glu Ser Tyr Gly Lys Glu Lys Gly Asp Glu Phe Cys Trp Ile Gln Asp Pro Val Ile Phe Tyr Val Thr Cys Ala Gly Tyr Phe 315 Gly Val Met Phe Phe Leu Asn Ile Ala Met Phe Ile Val Val Met Val 330 Gln Ile Cys Gly Arg Asn Gly Lys Arg Ser Asn Arg Thr Leu Arg Glu 345 Glu Val Leu Arg Asn Leu Arg Ser Val Val Ser Leu Thr Phe Leu Leu 360 Gly Met Thr Trp Gly Phe Ala Phe Phe Ala Trp Gly Pro Leu Asn Ile 375 Pro Phe Met Tyr Leu Phe Ser Ile Phe Asn Ser Leu Gln Gly Leu Phe 390 395 400

Ile Phe Ile Phe His Cys Ala Met Lys Glu Asn Val Gln Lys Gln Trp

405 410 415

Arg Gln His Leu Cys Cys Gly Arg Phe Arg Leu Ala Asp Asn Ser Asp 420 425 430

Trp Ser Lys Thr Ala Thr Asn Ile Ile Lys Lys Ser Ser Asp Asn Leu 435 440 445

Gly Lys Ser Leu Ser Ser Ser Ser Ile Gly Ser Asn Ser Thr Tyr Leu 450 455 460

Thr Ser Lys Ser Lys Ser Ser Ser Thr Thr Tyr Phe Lys Arg Asn Ser 465 470 475 480

His Thr Asp Ser Ala Ser Met Asp Lys Ser Leu Ser Lys Leu Ala His
485
490
495

Ala Asp Gly Asp Gln Thr Ser Ile Ile Pro Val His Gln Val Ile Asp
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Lys Val Lys Gly Tyr Cys Asn Ala His Ser Asp Asn Phe Tyr Lys Asn 515 520 525

Ile Ile Met Ser Asp Thr Phe Ser His Ser Thr Lys Phe 530 535 540

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Thr Tyr Trp Asn Leu Arg Ala Leu Leu Arg Leu His Arg Ser Leu Val 35 40 45

Ala Ile Asp His Val Ser Gln Lys Ser Phe Trp Glu Arg Tyr Asn His 50 55 60

Trp Ile Gln Leu Ser Met Leu Val Ser Asn Gln Asn Val Asn Leu Cys 70 75 80

Gln Ser Asn Ile Cys Gln Asn Gly Gly Thr Cys Leu Val Ala Ser Ser 85 90 95

Val Pro Ala Thr Ala Thr Cys Pro Lys Asn Ser Ile Tyr Tyr Met Gly
100 105 110

Ser Cys Tyr Val Phe Asp Thr Thr Leu Arg Asn Trp Asn Asp Ala Ala 115 120 125

Leu Tyr Cys Asn Asn Met Asn Ser Ala Thr Leu Pro Leu Val Glu Ser 135 Ala Glu Asp Gln Ala Phe Phe Ala Gly Tyr Leu Gln Ala Met Ile Pro 150 155 Ser Asn Pro Pro Ala Asp Met Arg Pro Pro Pro Asp Gly Ile Trp Thr 170 Ala Val Arg Gly Val Asn Asn Val Thr Arg Ala Ser Trp Val Tyr Tyr 185 Pro Gly Ser Phe Leu Val Thr Asp Thr Phe Trp Ala Pro Gln Glu Pro 200 Asn Ile Tyr Val Asn Tyr Asn Asp Val Cys Val Ala Leu Gln Ser Asp Ser Phe Tyr Arg Glu Trp Thr Thr Ala Leu Cys Thr Ile Leu Lys Tyr Thr Val Cys Lys Val Ala Pro Thr Gln Ile Gln Ala Lys Tyr Val Ala 250 Gln Cys Ser Cys Pro Asn Gly Tyr Gly Gly Gln Thr Cys Glu Thr Gln Ser Thr Thr Asn Gln Gln Ala Ser Thr Gln Arg Thr Cys Gly Ser Asn 280 Asp Phe Gln Phe Ser Cys Pro Asn Asp Gln Thr Ile Thr Val Asp Phe Ala Ser Phe Gly Ala Gln Gly Gly Ser Ile Ile Thr Ser Pro Pro Asp 315 Ala Leu Leu Gln Gln Ile Val Gln Lys Val Asn Ala Glu Thr Lys Lys 335 Thr Val Asn Phe Trp Ile Gly Thr Pro Asn Asn Cys Gln Leu Leu Met Val Thr Gly Ser Ser Thr Ser Tyr Ser Gln Cys Pro Ser Ser Pro Ser 355 365 Ser Thr Ala Asn Val Ile Cys Ser Thr Val Pro Gln Ser Thr Ala Ser Val Ser Ala Arg Pro Thr Gln Ser Ala Pro Val Asp Pro Val Ser Gln 385 395 Thr Met Ala Arg Arg Glu Val Tyr Thr Gly Val Gln Pro Ile Ala Ser Ala Leu Gly Gly Gln Ser Lys Lys Thr Asn Arg Lys Leu Asn Asn Ile

425

420

- Cys Gln Thr Lys Ile Gly Ala Pro Leu Ser Leu Phe Leu Phe Ser Arg 435 440 445
- Asn Glu Val Ile Thr Gly Phe Val Cys Ile Ser Leu Ile Ser Ala Ser 450 455 460
- Pro Gln Ile Ile Tyr Tyr Leu Cys Ala Val Ser Leu Ile Cys His Pro 470 475 480
- Ser Val Pro Asp Ser Ile Asn Lys Pro Arg Tyr Cys Lys Lys Glu Lys 485 490 495
- Lys Asp Gly Ile Thr Tyr Glu Gln Thr Arg Ala Cys Met Leu His Glu 500 510
- Gln Pro Cys Pro Asp Pro Gln Asn Val Glu Gly Thr Val Thr Arg Tyr 515 520 525
- Cys Asn Cys Gln Thr Ala Lys Trp Glu Thr Pro Asp Thr Thr Asn Cys 530 540
- Thr His Arg Trp Val Ala Glu Met Glu Thr Ala Ile Lys Asp Asn Gln 545 550 555 560
- Pro Val Glu Asp Ile Ser Ser Thr Val Asn Arg Gln Leu Lys Ser Thr 565 570 575
- Ile Glu Arg Thr Leu Phe Gly Gly Asp Ile Thr Gly Thr Val Arg Leu 580 585 590
- Ser Asn Asp Met Leu Ser Leu Ala Arg Asn Gln Phe Ser Val Leu Asn 595 600 605
- Asp Arg Asn Leu Arg Glu Asn Lys Ala Arg Asn Phe Thr Glu Asn Leu 610 615 620
- Gly Gly Ser Gly Asp Gln Leu Leu Ser Pro Val Ala Ala Thr Val Trp 625 630 635 640
- Asp Gln Leu Ser Ser Thr Ile Arg Ile Gln His Ala Ser Lys Leu Met 645 650 655
- Ser Val Leu Glu Gln Ser Val Leu Leu Gly Asp Tyr Met Thr Asp 660 665 670
- Gln Lys Leu Asn Leu Gln Tyr Ile Asn Trp Ala Met Glu Val Glu Arg 675 680 685
- Ser Glu Pro Glu Val Gln Thr Phe Gly Ala Ala Ala Ser Pro Asn Val 690 695 700
- Gln Asp Asp Met Gly Met Met Arg Val Met Ala Ala Ala Pro Pro Ala 705 710 715 720
- Pro Gln Pro Glu Thr Asn Thr Thr Ile Met Phe Pro Ser Leu Lys Leu 725 730 735

- Ser Pro Thr Ile Thr Leu Pro Ser Ala Ser Leu Leu Ser Ser Leu Ala 740 745 750
- Ser Pro Thr Pro Val Ala Gly Gly Gly Pro Ser Ile Leu Ser Ser Phe 755 760 765
- Gln Asp Asp Thr Pro Val Gly Met Ala Ser Thr Pro Asn Leu Asn Arg 770 775 780
- Asn Pro Val Lys Leu Gly Tyr Tyr Ala Phe Ala Gly Phe Gly Gln Leu 785 790 795 800
- Leu Asn Asn Asn Asn Asp His Thr Leu Ile Asn Ser Gln Val Ile Gly 805 810 815
- Ala Ser Ile Gln Asn Ala Thr Gln Ser Val Thr Leu Pro Val Asp His 820 825 830
- Pro Val Thr Phe Thr Phe Gln His Leu Thr Thr Lys Gly Val Ser Asn 835
- Pro Arg Cys Val Tyr Trp Asp Leu Met Glu Ser Lys Trp Ser Thr Leu 850 860
- Gly Cys Thr Leu Ile Ala Thr Ser Ser Asn Ser Ser Gln Cys Ser Cys 865 870 875 880
- Thr His Leu Thr Ser Phe Ala Ile Leu Met Asp Ile Ser Gly Gln Val 885 890 895
- Gly Arg Leu Ser Gly Gly Leu Ala Ser Ala Leu Asp Val Val Ser Thr 900 905 910
- Ile Gly Cys Ala Ile Ser Ile Val Cys Leu Ala Leu Ser Val Cys Val 915 920 925
- Phe Thr Phe Phe Arg Asn Leu Gln Asn Val Arg Asn Ser Ile His Arg 930 935 940
- Asn Leu Cys Leu Cys Leu Leu Ile Ala Glu Leu Val Phe Val Ile Gly 945 950 955 960
- Met Asp Arg Thr Gly Asn Arg Thr Gly Cys Gly Val Val Ala Ile Leu 965 970 975
- Leu His Tyr Phe Phe Leu Ser Ser Phe Cys Trp Met Leu Leu Glu Gly 980 985 990
- Tyr Gln Leu Tyr Met Met Leu Ile Gln Val Phe Glu Pro Asn Arg Thr 995 1000 1005
- Arg Ile Phe Leu Tyr Tyr Leu Phe Cys Tyr Gly Thr Pro Ala Val 1010 1015 1020
- Val Val Ala Ile Ser Ala Gly Ile Lys Trp Glu Asp Tyr Gly Thr 1025 1030 1035

Asp Ser Tyr Cys Trp Ile Asp Thr Ser Thr Pro Thr Ile Trp Ala Phe Val Ala Pro Ile Ile Val Ile Ile Ala Ala Asn Ile Ile Phe Leu Leu Ile Ala Leu Lys Val Val Leu Ser Val Gln Ser Arg Asp Arg Thr Lys Trp Gly Arg Ile Ile Gly Trp Leu Lys Gly Ser Ala Thr Leu Leu Cys Leu Leu Gly Ile Thr Trp Ile Phe Gly Phe Leu Thr Ala Val Lys Gly Gly Thr Gly Thr Ala Phe Ala Trp Ile Phe Thr Ile Leu Asn Cys Thr Gln Gly Ile Phe Ile Phe Val Leu His Val Val Leu Asn Glu Lys Val Arg Ala Ser Ile Val Arg Trp Leu Arg Thr Gly Ile Cys Cys Leu Pro Glu Thr Ser Ser Ala Ala Tyr Asn Ser Arg Ser Phe Leu Ser Ser Arg Gln Arg Ile Leu Asn Met Ile Lys Val Asn Gly His Ser Tyr Pro Ser Thr Ala Ser Thr Asp Asp Lys Glu Lys Gln Leu Thr Pro Ile Thr Lys Thr Thr Asp Trp Leu Ser Arg Leu Pro Asn Gln Asp Ser Val Ser Ile Pro Glu Ser Asn Phe Asn Asn Leu Asn Gly Thr Leu Glu Asn Ser Asn Leu Asn Ser Ala Glu Ile Lys Glu Glu Asp Glu Ile Pro Glu Leu Arg Arg Arg Val Thr Val Asp Leu Asn Pro Met Ile Val Ser Asn Asn Glu Ile Glu Arg Met Ser His Ala Ser Ser Asp Pro Arg Gly Ser Gln Ile Ile Glu Val Thr Ala Val Glu Lys Lys Ala Pro Val Lys Arg Ile Lys Phe Pro Leu Gly Ala Lys Gln Ser Glu Arg Gly Ser Gln

- His Arg Thr Lys Ala Lys His Gly Thr Gly Thr Leu Val Ser Pro 1325 1330 1335
- Trp His Ile Val Thr Ala Ala His Leu Ile Gly Ile Ser Glu Asp 1340 1345 1350
- Pro Leu Pro Asp Cys Asp Thr Gly Asn Leu Arg Glu Ala Tyr Phe 1355 1360 1365
- Val Arg Asp Tyr Lys Asn Phe Val Ala Phe Val Asn Val Thr Cys 1370 1380
- Ala Val Pro Glu Met Cys Lys Gly Leu His Arg Lys Asp Met Phe 1385 1390 1395
- Lys Pro Leu Ala Ile Lys Ser Leu Tyr Ile Arg Lys Gly Tyr Val 1400 1405 1410
- Gly Asp Gly Cys Ile Asp Arg Glu Ser Phe Asn Asp Ile Ala Val 1415 1420 1425
- Phe Glu Leu Glu Glu Pro Ile Glu Phe Ser Lys Asp Ile Phe Pro 1430 1440
- Gly Tyr Lys Leu Phe Gly Tyr Gly Arg Asp Pro Ser Asp Ser Val 1460 1465 1470
- Leu Glu Ser Gly Lys Leu Lys Ser Leu Tyr Ser Phe Val Ala Glu 1475 1480 1485
- Cys Ser Asp Asp Phe Pro Tyr Gly Gly Val Tyr Cys Thr Ser Ala 1490 1500
- Val Asn Arg Gly Leu Ser Cys Asp Gly Asp Ser Gly Ser Gly Val 1505 1510 1515
- Val Arg Thr Ser Asp Thr Arg Asn Val Gln Val Leu Val Gly Val 1520 1530
- Leu Ser Ala Gly Met Pro Cys Pro Glu Leu Tyr Asp Thr His Asn 1535 1540 1545
- Arg Gln Arg Gln Gln Arg Arg Gln Leu Thr Gln Glu Thr Asp Leu 1550 1560
- Leu Val Asp Val Ser Ala His Val Asp Phe Phe Cys Thr Cys Cys 1565 1570 1575
- Gly Met Cys Ser 1580
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Pro Ser Asn Val Arg Phe Ser Val Gln Lys Gly Ala Ser Ser Ser Leu 35 40 45

Val Ser Ser Ser Thr Phe Ile His Thr Asn Val Asp Gly Leu Asn Pro 50 55 60

Asp Ala Gln Thr Glu Leu Gln Val Leu Leu Asn Met Thr Lys Asn Tyr 65 70 75 80

Thr Lys Thr Cys Gly Phe Val Val Tyr Gln Asn Asp Lys Leu Phe Gln 85 90 95

Ser Lys Thr Phe Thr Ala Lys Ser Asp Phe Ser Gln Lys Ile Ile Ser 100 105 110

Ser Lys Thr Asp Glu Asn Glu Gln Asp Gln Ser Ala Ser Val Asp Met 115 120 125

Val Phe Ser Pro Lys Tyr Asn Gln Lys Glu Phe Gln Leu Tyr Ser Tyr 130 135 140

Ala Cys Val Tyr Trp Asn Leu Ser Ala Lys Asp Trp Asp Thr Tyr Gly
145 150 155 160

Cys Gln Lys Asp Lys Gly Thr Asp Gly Phe Leu Arg Cys Arg Cys Asn 165 170 175

His Thr Thr Asn Phe Ala Val Leu Met Thr Phe Lys Lys Asp Tyr Gln 180 185 190

Tyr Pro Lys Ser Leu Asp 195

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Gln Ile Val Thr Arg Lys Val Arg Lys Thr 5 10

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 Pro Asn Pro Met Cys Thr
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 Ile Arg Thr Met Lys Pro Leu Pro Arg His
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Thr Val Gly Val Ile Tyr Ser Gln Asn Gly Asn Asn Pro Gln Trp Glu
Leu Asp Tyr Arg Gln Glu Lys Ile Cys Trp Leu Ala Ile Pro Glu Pro
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Asn Gly Val Ile Lys Ser Pro Leu Leu
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Thr Lys Lys Val Ser Ser Met Lys Lys
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 Met Leu Leu Ser Ser Ile Gly Arg Arg Lys Ser Leu Pro Ser Val Thr
 Arg Pro Arg Leu Arg Val Lys Met Tyr Asn Phe Leu Arg Ser Leu Pro
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 Glu Ile Thr Leu Ser Glu Ser Asp Asn Ala Lys Glu Ser Ile
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Val Asp Met Val Phe Ser Pro Lys Tyr Asn Gln Lys Glu
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Met Phe Ile Thr Ile Ser Ile Lys Val Leu Trp Lys Asn
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